

REMARKS

Claims 1-14 were filed on September 22, 2003. In the Office Action mailed on June 28, 2005, the Examiner rejected Claims 1-14 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner also rejected Claims 1-3 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,642,896, issued to Pierce et al. (“the Pierce patent”), in view of Japanese Patent No. JP 9-2323, issued to Kamio (“the Kamio patent”). Claims 4-8 and 10-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Pierce patent in view of the Kamio patent and further in view of U.S. Patent No. 1,198,885, issued to Billinghurst (“the Billinghurst patent”). The Examiner indicated that Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, and to include all of the limitations of the base claim and any intervening claims.

Applicant has considered the Office Action and has amended the claims. Specifically, Claims 1, 4-9, 11 and 13-14 have been amended to more particularly point out and distinctly claim the invention. A new independent Claim 15 has been added to the application, which stems from rewritten Claim 9 as suggested by the Examiner. Claims 16-19, dependent from Claim 15, also were added. Finally, new Claims 20-27 also have been added to the application, with Claim 20 being generally broader than Claim 15. Based on these amendments and the following remarks, Applicant respectfully requests reexamination and reconsideration of the application, as amended.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112

The Examiner rejected Claims 1-14 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the

invention. Specifically, the Examiner rejected Claims 1 and 8, asserting failure to specify function with the phrase “tank means”. The Examiner asserted the same issue with the phrase “bracket means” in Claims 5, 7, 9, 11, and 13. Applicant has amended the noted claims to remove the word “means”, and thus it is believed that the rejection now is overcome.

In addition, the Examiner rejected Claim 1 based on an assertion of confusion as to whether lines 7-9 recited alternative language. Applicant has amended Claim 1 by using a Markush-style expression in place of what the Examiner considered unclear language, and so it is believed this rejection also is overcome.

#### CLAIM REJECTIONS UNDER 35 U.S.C. § 103

The Examiner rejected Claims 1-3 as being obvious over the Pierce patent in view of the Kamio patent. Applicant respectfully submits that the recited elements of amended independent Claim 1 and new independent Claim 20 are not taught or even suggested, alone or in combination, by the Pierce patent and/or the Kamio patent.

More specifically, all of the words recited in a claim must be taught by the cited references for an obviousness determination to be valid. *In re Wilson*, 424 F.2d 1382 (C.C.P.A. 1970). The Pierce patent, of which Applicant was a co-inventor and is incorporated by reference in the specification of the instant application, teaches the vehicle-type generally described in the preamble to Claim 1, but as the Examiner points out, does not teach that the tank forms part of the structure of the frame. The Examiner claims in Paragraph 4 of the Office Action that the Kamio patent “teaches . . . that it is advantageous to supply a tank as part of the vehicle frame, and particularly as a cross member because it is an effective utilization of space.” However, the Kamio patent (as related in the English language abstract) teaches a cross member that doubles as a compressed-air storage vessel, but that is attached directly at each of its ends, that is, without

any intervening structure, to the main members 1a and 1b of the vehicle frame. Therefore, each of Claims 1 and 20 is unobvious over the Kamio patent, either taken alone or in combination with the Pierce patent, because as now amended each claim specifically recites that the ends of the vessel are attached to the frame main members through one or more intervening structures, namely, a bracket and/or a suspension assembly hanger. This additional intervening structure(s) between the vessel and main member is important because, as noted in Applicant's specification, for example on page 6 at line 17 and carrying over to page 7, line 11, in discussing the preferred first embodiment of Applicant's invention, it is emphasized that bracket 73 that attaches vessel or tank 36 to main member 12, in part via suspension assembly bracket or hanger 14, plays an important role in force transfer during vehicle operation, so that frame 10, including the main members and the tank, can withstand such forces.

See also the discussions on:

- page 7 at lines 25-29 relating to the second embodiment of the present invention;
- page 9 at lines 3-12 relating to the third embodiment of the present invention;
- page 9 at lines 21-25 relating to the fourth embodiment of the invention;
- page 9 beginning at line 33 and carrying over to page 10, line 2 relating to the fifth embodiment of the invention; and
- page 10 at lines 11-14 and referring to all embodiments of the invention.

In contrast, again, the Kamio patent teaches a vessel attached directly to the frame main members, without any intervening structure. In addition, Claim 1 recites the use of tank end caps, another structural feature not taught or even hinted at by Kamio.

Thus, inasmuch as it is believed that independent Claim 1 as currently amended and new independent Claim 20 each is allowable over the cited references, Claims 2-14 dependent from Claim 1 and Claims 21-27 dependent from Claim 20 also are believed to be allowable.

The Examiner also rejected Claims 4-8 and 10-14 under 35 USC § 103(a) as being obvious over the Pierce patent, the Kamio patent and the Billinghurst patent. In particular, and especially with respect to Claim 5, the Examiner states that the “vessel of Billinghurst is secured to bracket means.” However, as particularly pointed out and distinctly claimed in Claims 1 and 20, the intervening structures in Applicant’s invention, namely, the brackets and/or hangers, as well as the vessel itself, are each intended to react forces encountered by the vehicle during operation. In contrast, Billinghurst teaches that vessels “21 and 22 are of flexible and elastic material” (see page 2, lines 16-17) which unequivocally would be incapable of reacting forces of the type encountered by a vehicle traveling over-the-road. In addition, the slings or straps 26 used to mount vessels 21 and 22 are made of leather which, like the rubber that the vessels are made of, is a flexible material (see page 2, lines 26-28). Moreover, in describing reservoir 20 at page 3, lines 7-10, it is clearly stated that “the essential feature of this reservoir is that it carries no load”, even though vessel or reservoir 20 preferably is formed of metal. Thus, it is clear that independent Claims 1 and 20 distinguish over the Billinghurst patent, when viewed either alone or in combination with the Pierce patent and/or the Kamio patent, since these references, neither alone or in combination, teach, suggest or even hint at the use of intervening structures, such as brackets and/or hangers, for securing a vessel to frame main members which, taken together, form part of a vehicle frame, to assist in reacting forces to which the vehicle is subjected during operation. Inasmuch as independent Claims 1 and 20 are believed to be allowable, Claims 2-14 and 21-27 dependent therefrom also are believed to be allowable.

Applicant was the first to recognize the advantage of utilizing an air vessel as a vehicle frame cross member, in combination with brackets and/or suspension assembly hangers, for efficiently and satisfactorily reacting loads that a vehicle encounters during vehicle operation. By combining the elements as Applicant has, a new and unexpected result has been achieved,

that is, a frame structure that provides sufficient strength and durability for the loads encountered by a vehicle operating over the road, but also in reducing the weight and structural complexity of the vehicle by combining the functions of the compressed-air vessel and a frame cross member in a single structure.

The results produced by Applicant's invention have been long sought after by those skilled in the art, but until Applicant's invention the results have been unobtainable.

In view of the above, it is submitted that the claims in the application now are in condition for allowance. Reconsideration of the rejections is respectfully requested and allowance of Claims 1-27 at an early date is hereby respectfully solicited.

Respectfully submitted,

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